

We claim:-

1. A stabilized thermoplastic polyurethane comprising
  - 5 (i) phenolic antioxidants and
  - (ii) metal deactivators selected from  
2-(2-benzimidazolyl)phenol,  
3-(2-imidazolin-2-yl)-2-naphthol,  
2-(2-benzoxazolyl)phenol,  
4-diethylamino-2,2'-dioxy-5-methylazobenzenes,  
3-methyl-4-(2-oxy-5-methylphenylazo)-1-phenyl-5-pyrazolones, tris(2-tert-butyl-4-thio(2'methyl-4'hydroxy-5'tert-butyl)phenyl-5-methyl)phenyl phosphite, decamethylenedicarboxy-disalicyloylhydrazides,  
3-salicyloylamino-1,2,4-triazole,  
2',3-bis-((3-(3,5-di-tert-butyl-4-hydroxyphenyl)-propionyl)propionhydrazide, 2,2'-oxamidobis-(ethyl-3-(3,5-di-tert-butyl-4-hydroxyphenyl)-propionates), derivatives of hydrazine, derivatives of oxamide, triazole derivatives of salicylaldehyde and hydrazine derivatives of salicylaldehyde.
- 25 2. A thermoplastic polyurethane as claimed in claim 1, comprising (i) antioxidants in an amount of from 0.1 to 5% by weight and (ii) metal deactivators in an amount of from 0.01 to 2.5% by weight, based on the total weight of the TPU.
- 30 3. A thermoplastic polyurethane as claimed in claim 1 or 2, additionally comprising
  - 35 (iii) flameproofing agents.
4. A metal deactivator concentrate for the preparation of a thermoplastic polyurethane as claimed in any of claims 1 to 3, comprising thermoplastic polyurethane and metal deactivators (ii) in an amount of from more than 2.5 to 40% by weight, based on the total weight of the thermoplastic polyurethane.
- 45 5. The use of thermoplastic polyurethanes as claimed in any of claims 1 to 3 for the production of films, rollers, fibers, claddings in automobiles, hoses, cable connectors, bellows,

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trailing cables, cable sheaths, seals, belts and/or film-laminated flat conductors.

6. A film-laminated flat conductor comprising thermoplastic polyurethane.
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7. A film-laminated flat conductor as claimed in claim 6, which comprises stabilized thermoplastic polyurethane comprising (i) antioxidants and (ii) metal deactivators.
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8. A film-laminated flat conductor as claimed in claim 6 or 7, which is composed of two films of thermoplastic polyurethane or stabilized thermoplastic polyurethane as claimed in any of claims 1 to 3 adhering to one another, a metal strip or a
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- plurality of metal strips having a thickness of from 1 to 500 µm being laminated between the films.
9. A process for the production of a film-laminated flat conductor as claimed in any of claims 6 to 8 by providing two
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- TPU films and then incorporating metal strips between the two films

or

- 25 by coextruding TPU films with metal strips.
10. The use of a film-laminated flat conductor as claimed in any of claims 6 to 8 in means of transport, electrical apparatuses and machines.
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11. An electrical apparatus, machine and/or means of transport comprising a film-laminated flat conductor as claimed in any of claims 6 to 8.

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Film-laminated flat conductors comprising thermoplastic polyurethanes

5 Abstract

Film-laminated flat conductors comprising thermoplastic polyurethane and stabilized thermoplastic polyurethane, containing antioxidants and metal deactivators, are preferably  
10 used in film-laminated flat conductors.

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